

Silicon NPN Power Transistors

BD439 BD441

DESCRIPTION

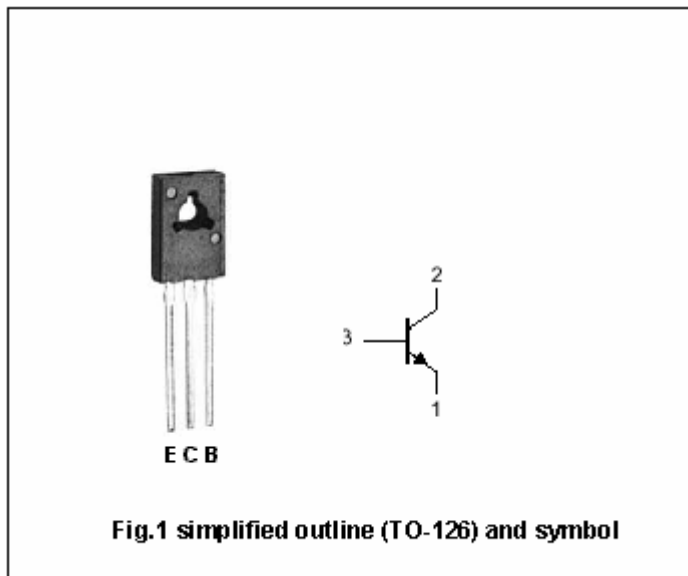
- With TO-126 package
- Complement to type BD440, BD442

APPLICATIONS

- For medium power linear and switching applications

PINNING

PIN	DESCRIPTION
1	Emitter
2	Collector; connected to mounting base
3	Base



Absolute maximum ratings (Ta=25)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	BD439	60	V
		BD441	80	
V _{CEO}	Collector-emitter voltage	BD439	60	V
		BD441	80	
V _{EBO}	Emitter -base voltage	Open collector	5	V
I _C	Collector current (DC)		4	A
I _{CM}	Collector current-Peak		7	A
I _B	Base current		1	A
P _C	Collector power dissipation	T _C =25	36	W
T _j	Junction temperature		150	
T _{stg}	Storage temperature		-65~150	

Silicon NPN Power Transistors

BD439 BD441

CHARACTERISTICS

T_j=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEsat}	Collector-emitter saturation voltage	I _C =2A; I _B =0.2A			0.8	V
V _{BE-1}	Base-emitter on voltage	I _C =10mA; V _{CE} =5V		0.58		V
V _{BE-2}	Base-emitter on voltage	I _C =2A; V _{CE} =1V			1.5	V
V _{CEO(SUS)}	Collector-emitter sustaining voltage	BD439	I _C =0.1A; I _B =0	60		V
		BD441		80		
I _{CBO}	Collector cut-off current	BD439	V _{CB} =60V; I _E =0		100	μA
		BD441				
I _{CES}	Collector cut-off current	BD439	V _{CE} =60V; V _{BE} =0		100	μA
		BD441				
I _{EBO}	Emitter cut-off current	V _{EB} =5V; I _C =0			1	mA
h _{FE-1}	DC current gain	BD439	I _C =10mA; V _{CE} =5V	20	130	
		BD441		15		
h _{FE-2}	DC current gain	I _C =0.5A; V _{CE} =1V	40		140	
h _{FE-3}	DC current gain	BD439	I _C =2A; V _{CE} =1V	25		
		BD441		15		
f _T	Transition frequency	I _C =250mA; V _{CE} =1V	3			MHz

Silicon NPN Power Transistors

BD439 BD441

PACKAGE OUTLINE

